



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,086	03/11/2004	Nobuyuki Osaki	16869B-105700US	8546

20350 7590 05/16/2006

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

PAN, JOSEPH T

ART UNIT PAPER NUMBER

2135

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,086

Applicant(s)

OSAKI, NOBUYUKI

Examiner

Joseph Pan

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 9-25 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-25 and 30-32 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 27-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/31/05&3/11/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2006 has been entered.

Claim Objections

2. Claim 27 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Appropriate correction is required.

Claims 28-29 are dependent upon claim 27, therefore claims 28-29 are objected also.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bojinov et al. (U.S. Pub. No.: 2005/0102498) in view of Shim (U.S. Patent No.: 5,805,483).

Referring to claim 1:

i. Bojinov et al. teach:

A method for encrypted data storage in a storage system, the method comprising:

Converting blocks of data to produce corresponding converted blocks of data, wherein a converted block of data is encrypted with cryptographic criteria (see page 3, paragraph [0025], lines 10-16 of Bojinov et al.);

Receiving and processing a read request in order to access read data from said storage system and in response thereto accessing said read data from at least one decrypted block of data, wherein said read data is decrypted from one converted block of said converted blocks of data using said cryptographic criteria to produce said at least one decrypted block of data (see page 1, paragraph [0014], lines 5-8 of Bojinov et al.).

However, Bojinov et al. do not specifically mention receiving and processing a read request during said converting.

ii. Shim discloses a method of converting data outputting sequence inverse DCT and circuit wherein Shim disclose “three operations, which are described below, **progress in parallel**. First, the output data of IDCT unit 7, shown in FIG. 1, is packed and then is written to a predetermined memory. Second, a **read request** signal for reading data from IDCT unit 7 is generated and a read accept of IDCT unit 7 is processed and read during a prescribed time. Third, the **format of the data** read from IDCT unit 7 is **converted**. A time gap between request and accept is solved by an internal buffer.” (see column 4, lines 18-27 of Shim, emphasis added).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Shim into the method of Bojinov et al. to process read request and perform data conversion in parallel.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Shim into the system of Bojinov et al. to process read request and perform data conversion in parallel, because it's well known in the art that parallel processing is more efficient than sequential processing.

Referring to claim 2:

Bojinov et al. and Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose that the conversion replaces each block of data by a corresponding converted block of data thereof (see page 3, paragraph [0025], lines 10-16 of Bojinov et al.).

Referring to claim 3:

Bojinov et al. and Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose that the steps of encryption and decryption comprise executing computer program code on a data processing component (see claims 26, 28 of Bojinov et al.).

Referring to claim 4:

Bojinov et al. Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose a communication network comprising a switched fabric and a plurality of devices (see figure 6 of Bojinov et al.).

Referring to claim 5:

Bojinov et al. Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Shim further disclose the logic circuitry (see abstract of Shim).

Referring to claim 6:

Bojinov et al. and Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose that a file-level read request produces one or more block-level read requests (see page 3, paragraph [0030], lines 8-12 of Bojinov et al.).

Referring to claim 27:

Bojinov et al. and Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose storing the data block to the storage device in response to a write request from the host device, and encrypting the data block with the cryptographic criteria before the data being written to the data storage (see page 3, paragraph [0025], lines 10-16 of Bojinov et al.).

Referring to claim 28:

Bojinov et al. and Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose the data storage supports file-level write request (see page 2, paragraph [0019], lines 6-9 of Bojinov et al.), which produces block-level write requests (see page 3, paragraph [0030], lines 8-12 of Bojinov et al.).

Referring to claim 29:

Bojinov et al. and Shim teach the claimed subject matter: a method for encrypted data storage in a storage system (see claim 1 above). Bojinov et al. further disclose a host device (see e.g. figure 1, element 622 of Bojinov et al.).

Response to Arguments

5. Applicant's arguments filed on April 20, 2006 have been considered and are persuasive. The applicant's argument that "More specifically, there is no processing of a read request during converting of data, as recited in claim 1" has been addressed in the above Office Action.

Allowable Subject Matter

6. Claims 9-25, 30-32 are allowed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Pan whose telephone number is 571-272-5987.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Application/Control Number: 10/799,086
Art Unit: 2135

Page 7

Joseph Pan
May 8, 2006



KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100